

**Hazardous Air Pollutant Emissions
From the Pesticide Active Ingredient
Production Industry**

**Supplementary Information Document
for Proposed Standards**

Emission Standards Division

**U. S. Environmental Protection Agency
Office of Air And Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711**

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Date: November 11, 1996

Subject: Documentation of Data Base Containing Information from
Section 114 Responses and Site Visits for the
Production of Pesticide Active Ingredients NESHAP
EPA Contract No. 68-D1-0115; Work Assignment No. VI-144
ESD Project No. 93/59; MRI Project No. 6506-44

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I. Introduction

This memorandum compiles information provided by the pesticide active ingredient (PAI) production industry. This information will be used in developing maximum achievable control technology (MACT) for national emissions standards for hazardous air pollutants (NESHAP) for the production of PAI. Information for this industry was provided: (1) in response to the Section 114 information collection request for this industry that was sent to nine companies, (2) in response to requests for information during several EPA site visits, and (3) during followup telephone conversations to clarify information in the responses. The Section 114 requests were sent on October 5, 17, or 23, 1995. Data were obtained from 23 plants at ten companies. In some instances, additional calculations were performed based on information submitted. The data base for the PAI production source category is contained in the attachment.

II. References

1. Memorandum from Pagett, G., PES (Schmidtke, K., MRI), to Banker, L., EPA/ESD/OCG. May 12, 1995. Summary report for September 28, 1993, site visit to Ciba-Geigy's St. Gabriel, Louisiana plant.
2. Memorandum from Pagett, G., PES (Schmidtke, K., MRI), to Banker, L., EPA:ESD. May 12, 1995. Summary report for September 29, 1993, site visit to Zeneca Ag Company, Bucks, Alabama.

3. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA/ESD. August 30, 1995. Transmittal of general plant process and emissions data for the La Porte, Texas plant.
4. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA/ESD. October 6, 1995. Transmittal of descriptions of wastewater treatment systems, emission estimates, and equipment leak components for the La Porte, Texas plant.
5. Letter from Altamirano, C., Sandoz Agro, Inc., to Jordan, B., EPA/ESD. December 5, 1995. Response to Section 114 information collection request for the Beaumont, Texas plant.
6. Letter from Herrold, K., Zeneca Ag Products, to Jordan, B., EPA/ESD. December 6, 1995. Response to Section 114 information collection request for the Bayport, Texas and Richmond, California plants.
7. Letter from Herrold, K., Zeneca Ag Products, to Jordan, B., EPA/ESD. December 6, 1995. Transmittal of response to Section 114 information request for Perry, Ohio plant.
8. Memorandum from Hale, C., MRI, to Banker, L., EPA/ESD. December 8, 1995. Summary report of July 26, 1995, site visit to Monsanto Plant, Muscatine, Iowa.
9. Letter from Lockemer, R., Rhone-Poulenc, to Jordan, B., EPA/ESD. December 8, 1995. Response to Section 114 information collection request for the Institute, West Virginia plant.
10. Letter from Ray, T., Elf Atochem North America, Inc., to Jordan, B., EPA/ESD. December 11, 1995. Response to Section 114 information collection request for the Riverview, Michigan plant.
11. Letter from Alderman, J., Dow Chemical Company, to Jordan, B., EPA/ESD. December 14, 1995. Response to Section 114 information collection request for the Midland, Michigan; Pittsburg, California; and Freeport, Texas plants.
12. Letter from Lockemer, R., Rhone-Poulenc, to Jordan, B., EPA/ESD. December 14, 1995. Transmittal of response to Section 114 information collection request for the Mt. Pleasant, Tennessee plant.
13. Letter from Fletcher, L., DuPont Agriculture Products, to Banker, L., EPA/ESD. December 15, 1995. Response to Section 114 information collection request for the Belle, West Virginia; Manati, Puerto Rico; and Mobile, Alabama plants.

14. Letter from Chowdary, R., Elf Atochem North America, Inc., to Jordan, B., EPA/ESD. December 21, 1995. Response to Section 114 information collection request for the Carrollton, Kentucky plant.
15. Letter from Willett, J., American Cyanamid Company, to Jordan, B., EPA/ESD. December 29, 1995. Response to Section 114 information collection request for the Hannibal, Missouri plant.
16. Letter from Crews, R., Ciba-Geigy Corporation, to Jordan, B., EPA/ESD. January 12, 1996. Response to Section 114 information collection request for the McIntosh, Alabama plant.
17. Letter from Peshkin, J., Monsanto, to Banker, L., EPA/ESD. January 29, 1996. Submittal of additional information regarding the site visit at the Muscatine, Iowa plant.
18. Letter from Herrold, K., Zeneca Ag Products, to Banker, L., EPA/ESD. February 8, 1996. Response to Section 114 information collection request for the Cold Creek Plant in Bucks, Alabama.
19. Letter from Mureebe, O., Uniroyal Chemical Corporation, Inc., to Banker, L., EPA/ESD. February 13, 1996. Response to Section 114 information collection request for the Naugatuck, Connecticut; Gastonia, North Carolina; and Geismar, Louisiana plants. (2 letters sent on the same date)
20. Letter from Mureebe, O., Uniroyal Chemical Corporation, Inc., to Banker, L., EPA/ESD. February 13, 1996. Response to Section 114 information collection request for the Naugatuck, Connecticut; Gastonia, North Carolina; and Geismar, Louisiana plants. (2 letters sent on the same date)
21. Letter from Raff, B., Ciba-Geigy Corporation, to Banker, L., EPA/ESD. February 14, 1996. Submittal of additional information regarding the site visit at the St. Gabriel, Louisiana plant.
22. Letter from Bradley, G., Rhone-Poulenc, to Banker, L., EPA/ESD. February 19, 1996. Submittal of additional information for the Institute, West Virginia plant.
23. Notes on allocating fraction of process vent, equipment leaks, and wastewater emissions to individual processes based on production levels for Ciba-Geigy's St. Gabriel, Louisiana plant. Prepared by K. Schmidtke, MRI. February 23, 1996.

24. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA:ESD. March 4, 1996. Corrections to original information packet submitted August 30, 1995 for the La Porte, Texas plant.
25. Letter from Herrold, K., Zeneca Ag Products, to Schmidtke, K., MRI. March 14, 1996. Submittal of completed Table 5, Wastewater Survey Information, for Cold Creek plant in Bucks, Alabama.
26. Telecon. Schmidtke, K., MRI, with Alford, R., Zeneca Ag Products. March 14, 1996. Discussion of response to the Section 114 information collection request for the Cold Creek plant in Bucks, Alabama.
27. Letter from Alford, R., Zeneca Ag Products, to Banker, L., EPA/ESD/OCG. March 19, 1996. Completed Table 4, Information Requested for Equipment Leaks, for the Cold Creek Plant in Bucks, Alabama.
28. Letter from Herrold, K., Zeneca Ag Products, to Banker, L., EPA/ESD. March 21, 1996. Submittal of additional information for the Cold Creek Plant in Bucks, Alabama.
29. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA:ESD. March 25, 1996. Transmittal of additional information for the La Porte, Texas plant.
30. Telecon. Schmidtke, K., MRI, with Willett, B., American Cyanamid. March 26, 1996. Discussion of the response to the Section 114 information collection request for Hannibal, Missouri plant.
31. Telecon. Schmidtke, K., MRI, with Montague, R., Uniroyal Chemical. March 28, April 17 and 19, May 15, and July 3, 1996. Discussion of response to Section 114 information collection request for Geismar, Louisiana plant.
32. Telecon. Schmidtke, K., MRI, with Dumelow, J., DuPont Agriculture Products. April 4, May 14, and September 16, 1996. Discussion of response to the Section 114 information collection request for the Mobile, Alabama plant.
33. Telecon. Schmidtke, K., MRI, with Germinario, T., American Cyanamid. April 22 and 23, 1996. Discussion of the response to the Section 114 information collection request for Hannibal, Missouri plant.
34. Telecon. Schmidtke, K., MRI, with Bradley, G., Rhone-Poulenc. April 23, 1996. Discussion of response to the Section 114 information collection request for the Institute, West Virginia plant.

35. Notes on allocating fraction of total process vent and wastewater emissions to individual processes based on production levels, for American Cyanamid, Hannibal, Missouri, prepared by K. Schmidtke, MRI. April 25, 1996.
36. Memorandum from Randall, D. and C. Hale, MRI, to Banker, L., EPA:ESD. April 26, 1996. Summary report for July 27, 1995, site visit to E.I. DuPont DeNemours and Company, Inc., La Porte, Texas.
37. Telecon. Schmidtke, K., MRI, with Alford, R., Zeneca Ag Products. April 26, June 4, September 20, and October 3, 1996. Discussion of response to the Section 114 information collection request for the Cold Creek plant in Bucks, Alabama.
38. Telecon. Schmidtke, K., MRI, with Bradley, G. and R. Tenney, Rhone-Poulenc. April 30, 1996. Discussion of response to the Section 114 information collection request for the Institute, West Virginia plant.
39. Telecon. Randall, D., with Chowdary, R., Elf Atochem North America, Inc. May 3 and 21, 1996. Discussion of response to the Section 114 information collection request for the Carrollton, Kentucky plant.
40. Letter from Herrold, K., Zeneca Ag Products, to Schmidtke, K., MRI. May 7, 1996. Process flow diagram; completed Table 5, Wastewater Survey Information; and completed Table 6, Design of Wastewater Collection and Treatment Controls, for the Richmond, California plant.
41. Telecon. Schmidtke, K., MRI, with Fanjung, E., Zeneca Ag Products. May 9, 1996. Discussion of response to the Section 114 information collection request for the Richmond, California plant.
42. Telecon. Schmidtke, K., MRI with Dickey, H., Zeneca Ag Products. May 14, 1996. Discussion of response to the Section 114 information collection request for the Perry, Ohio plant.
43. Letter from Dumelow, J., DuPont Agriculture Products, to Schmidtke, K., MRI. May 15, 1996. Submittal of additional information for the Mobile, Alabama plant.
44. Tabulated results of process vent emissions for two pesticide active ingredient processes and data used in estimating storage tanks emissions, for Monsanto's Muscatine, Iowa plant, prepared by D. Randall, MRI. May 17, 1996.

45. Letter from Willett, B., American Cyanamid, to Schmidtke, K., MRI. May 21, 1996. Submittal of additional information for the Hannibal, Missouri plant.
46. Letter from Alderman, J., Dow Chemical Company, to Banker, L., EPA/ESD. May 30, 1996. Submittal of additional information for the Pittsburg, California, and Freeport, Texas plants.
47. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA:ESD. May 30, 1996. Storage Tank Summary Tables for the Lannate/API process for La Porte, Texas plant.
48. Notes on estimating emissions from an intermediate process at Zeneca Cold Creek plant, Bucks, Alabama, prepared by K. Schmidtke, MRI. June 3, 1996.
49. Letter from Smith, D., Zeneca Ag Products, to Banker, L., EPA:ESD. June 11, 1996. Transmittal of additional information for the Cold Creek plant in Bucks, Alabama.
50. Letter from Cheek-Deajon, K., DuPont Specialty Chemicals, to Banker, L., EPA:ESD. June 20, 1996. Transmittal of additional information for the La Porte, Texas plant.
51. Telecon. Schmidtke, K., MRI, with Gulak, J., Uniroyal Chemical. July 2 and 12, 1996. Discussion of response to the Section 114 information collection request for the Naugatuck, Connecticut plant.
52. Letter from Gulak, J., Uniroyal Chemical, to Schmidtke, K., MRI. July 1996. Transmittal of additional information for the Naugatuck, Connecticut plant.
53. Telecon. Schmidtke, K., MRI with Keyes, K., Rhone-Poulenc. August 1 and 21, 1996. Discussion of response to the Section 114 information collection request for the Institute, West Virginia plant.
54. Letter from Alderman, J., Dow Chemical Company, to Schmidtke, K., MRI. August 16, 1996. Submittal of additional information for the Pittsburg, California plant.
55. Letter from Dumelow, J., DuPont Agriculture Products, to Schmidtke, K., MRI. September 16, 1996. Submittal of additional information for the Mobile, Alabama plant.
56. Letter from Dumelow, J., DuPont Agriculture Products, to Schmidtke, K., MRI. September 19, 1996. Submittal of additional information for the Mobile, Alabama plant.

57. Letter from Alderman, J., Dow Chemical Company, to Schmidtke, K., MRI. September 20, 1996. Submittal of additional information for the Pittsburg, California plant.
58. Letter from Alford, R., Zeneca Ag Products, to Schmidtke, K., MRI. October 3, 1996. Submittal of additional information for the Cold Creek plant in Bucks, Alabama.
59. Letter from Dumelow, J., DuPont Agriculture Products, to Schmidtke, K., MRI. December 3, 1996. Submittal of additional information for the Mobile, Alabama plant.

Attachment

Docket No. A-95-20

Category II-B

The following information is located in the confidential files of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. This information is confidential pending final determination by the Administrator and is not available for public inspection.

Attachment to Documentation of Data Base Containing Information from Section 114 Responses and Site Visits Memorandum (part of docket item II-B-21).

This attachment consists of a confidential printout of the data base for the pesticide active ingredient production source category.